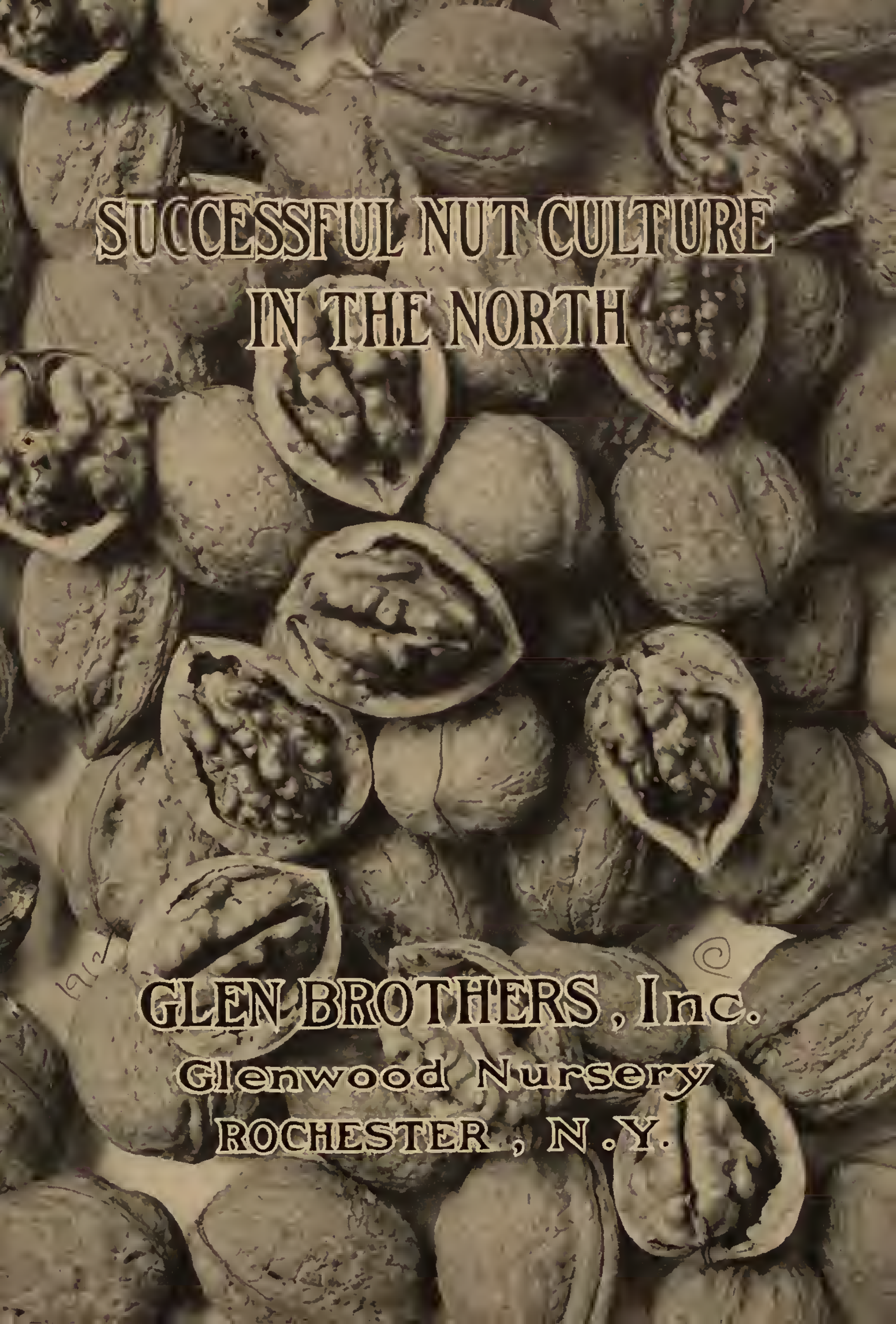

SUCCESSFUL NUT CULTURE IN THE NORTH

1917

GLEN BROTHERS, Inc.
Glenwood Nursery
ROCHESTER, N.Y.

Introductory

Nut belt moving northward like the Corn belt.
Successful efforts to establish hardy varieties of commercially imported nuts.
Growing interest in nuts as food.
Our interest solely in propagating and selling nursery stock. No land promotions.

Economic Importance

Value of existing orchards and facts on present size of industry.
Imports and other facts relating to consumption.
Food value: Increasing consumption based on real worth of product.

Great Possibilities for Profit

Relation of selling price to cost of production.
Advantages over ordinary fruit growing.
Ease of packing and shipping; non-perishability.
Distance from market no factor.
Easy and cheap maintenance and harvesting.
Few parasitic enemies.
Long life of trees.
Intercropping while waiting for trees to mature.

Varieties Available for Northern Planting

Characteristics and special advantages of each variety.
Details as to soil, planting, cultivating, harvesting, etc., of each variety.

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Successful Nut Culture in the North

THE Nut Area or "Nut Belt" has moved northward! Just what significance that fact carries in your mind depends on how well acquainted you are with the great importance and profitableness of nut-growing as an industry, and how well you appreciate the desirability and advantages of purely incidental nut-growing; that is, the few trees you may set out in your door-yard and lawn principally for the purpose of ornament and shade.

The experimental stage is past. The "Nut Belt" has moved north. It is now established in the North and the fact is testified to by more or less extensive Pecan Orchards and English Walnut Orchards in New York State, New Jersey, Pennsylvania, Delaware, Rhode Island, Connecticut and other northern states.

But only a beginning has been made, and a small one at that. Enough has been done to establish the entire practicability of Northern Nut Growing on a commercial scale: hardy varieties of the Pecan and English Walnut have been time-tested and found worthy in every respect. But the quantity of nuts at present produced in the north is negligible.

To the northern orchardist and farmer who is perhaps familiar with the commercial aspects of nut culture, the fact is deeply significant. For, to him, it means the opening of a new and richly remunerative use for at least a part of his land now devoted to less lucrative uses. And to the horticulturist, it means a rich reward for long years of painstaking labor and patient waiting for the results of countless careful experiments.

As an industry, Nut Culture in the United States, North and South, is but the merest infant. In the face of a constantly and rapidly increasing consumption, we do not begin to supply the domestic market, but are forced to import our principal supply.

Nut growing, as an industry, has a wonderful future in the United States, and for confirmation of this one has only to look at the astonishingly rapid increase in our importations of nuts, the cause for which is to be found in the fast growing appreciation of the high food value and exceptional palatability of the product.

Already the alluring prospects of the situation have been made the theme of many prospectuses of so-called "nut promotions," which are in reality nothing more nor less than land promotions, most of which it is feared are of exceedingly doubtful investment value, it being the practice to dispose of otherwise unsaleable and practically valueless lands under the guise of "Pecan Plantations" or "Apple Orchards," as the case may be.

Glen Brothers wish it understood that they have no interest whatever in any of these land promotions, and that their sole business is the propagating and selling of nursery stock. Besides nut trees, we propagate and sell deciduous and evergreen trees for ornamental purposes, plants, shrubs, and fruit tree stock of practically every description. We do not care where you plant your nut trees, beyond recognizing a certain mutuality of interest in the successful growth of whatever nursery stock you may purchase from us. It is our desire to aid you in the selection of varieties best suited to your locality and to lend all assistance in our power to secure the ultimate success of your planting, whatever and wherever it may be.

ECONOMIC AND COMMERCIAL IMPORTANCE

Nuts are now more valuable in actual dollars and cents to the State of California than oranges. To the average person, that statement may appear exaggerated. But it is a fact, and it is nothing short of astounding when you think of the world-wide fame of California Oranges.

Imagine, if you can, the immense wealth represented in this renowned orange crop. It has created many millionaires. Yet the United States Government Crop Reports show that California's crop of English Walnuts has a greater cash value than her orange crop.

Weigh that carefully in your mind. It gives you an idea of the tremendous commercial importance and vast possibilities of the nut-growing industry.

The State of Oregon, alone, annually consumes four hundred thousand dollars worth of **imported** English Walnuts. Yet some of the most extensive Walnut Orchards in this country are in Oregon, and she annually produces a very considerable crop of nuts, most of which are of a quality equally as good as the imported. But her own crop does not begin to supply the domestic demands, and she is obliged to import nearly half a million dollars worth each year.

United States Nut Imports Nearly Fifteen Millions Yearly

Every year, the United States imports nearly fifteen million dollars worth of nuts and nut products. Few people, in all probability, would have believed that the total consumption of nuts for the entire world approached anywhere near that enormous figure. And the volume of our importations is all the more surprising in view of the assurance, given us by noted horticulturists, that our own climate and soil are better adapted for nut growing than those of the countries from which we import.

The existence of a large domestic market is indicated by the quantity of nuts imported. Yet we are assured by food experts and scientific men that not only is the real development of our domestic market hardly begun, but that we can command a very respectable export trade as soon as our producers are in a position to supply it. It is to be regretted, however, there are no indications of our being in that position for several years at least, and in the meantime, the domestic demand is increasing each year.

Increasing Consumption of Nuts

A very good idea of how rapidly the consumption of nuts is increasing is gained by an inspection of the statistics of the Department of Commerce and Labor which show that in 1902 we imported 11,927,432 pounds of English Walnuts. In four years these figures had more than doubled, for in 1906 we imported 24,917,023 pounds, valued at $2,193,653.00. In the following year, 1907, an increase of more than one-third was recorded and the figures were 32,590,000 pounds.

One of the foremost horticulturists in the world, Luther Burbank, says: "The consumption of nuts is probably increasing among all civilized nations today faster than any other food, and we should keep up with this increasing demand and make the increase still more rapid by producing nuts of uniformly good quality. This can be done without extra effort and with an increase in the health, and a rapid and permanent increase in the wealth of ourselves and neighbors."

The encouraging thing regarding the increasing consumption of nuts is that it is a perfectly normal and natural one in every respect and has real merit and the best of economic causes for its basis. For years our doctors, food experts, and men of science, have been extolling the superior merits of the nut as an article of daily food. Of recent years, this sentiment in favor of nuts has grown until it has assumed almost the proportions of a crusade. And the people are beginning to recognize that back of it all there is something more than mere fadism,—that there is a sound, scientific, and economic basis for it.

Far Greater Food Value Than Meat

It is asserted by those who have made a close study of the economic side of the nut-growing industry, that the day is fast approaching when nuts will be in common use as an ordinary article of food, in reality a necessity, instead of being considered, as at present, in the nature of a luxury, along with candy and other such tid-bits. To those who are unacquainted with the facts of the situation, that day may seem far removed.

But what will happen, do you think, when there is produced a quantity of nuts sufficient to form a dependable supply, and when **all** the people, instead of a few, as at present, realize the truth about nuts and **know** that they far outrank practically every other article of common diet in actual food value.

To most people the truth regarding the food value of nuts comes as a revelation, and indeed it is remarkable.

Taking the figures prepared by Prof. John Craig, Horticulturist, New York State College of Agriculture, Ithaca, N. Y.: The average fuel value of nine different kinds of common food is found to be only 1169.44 calories, as against an average fuel value of 2591.66 calories, for nine varieties of nuts, or nearly three times that of ordinary foods.

In view of this remarkable showing, and considering their exceptional palatability, the wonder is that nuts have not come into more common use. There are two very good reasons, however, why they have not. First, the scarcity of really good nuts; and second, the lack of knowledge on the part of the public generally as to their great nutritive qualities.

Now, when the cost of necessities continues to advance at an alarmingly rapid rate, we are looking eagerly not only for new sources of supply, but also for new articles of food that can be adapted to our needs. It is conservatively predicted, therefore, that once the production of nuts is undertaken on an adequate commercial scale, they will become an established part of our daily diet as staple as potatoes.

As an instance of the important economic position of nuts in other countries, and how highly they are regarded, there is in Crimea an English Walnut tree estimated to be a thousand years old. It is the cherished and jealously guarded property of four or five families who own it jointly and who subsists very largely on the revenue of its product, which consists of about one hundred thousand nuts each season.

In the mountainous western portion of Europe, where, owing to the roughness of the ground, cereals can not be cultivated, the chestnut forms an indispensable adjunct to the dietary. To a great extent, it takes the place of wheat. The chestnuts are first dried, then roasted, steamed or boiled. They are also ground into a flour which makes excellent bread.

GREAT POSSIBILITIES FOR PROFIT

The nut-growing industry leaves nothing to be desired from the viewpoint of the commercially inclined whose interest centers chiefly in the dollars and cents side.

In the matter of profits, there is probably no other crop, grain, vegetables or fruit, comparable to that of nuts, while in point of safety, and regularity, no other is so dependable, so free from parasitic enemies or so well able to withstand the vicissitudes of changeable weather conditions.

English Walnuts, Pecans, Filberts, Hickories, and Chestnuts all yield, under proper conditions, far greater net profits per acre than wheat, corn or fruit. And this is no mere guess, but is being demonstrated year in and year out by existing nut orchards.

In the Prince orchard in Oregon, 35 acres of seedling English Walnuts in the **twelfth** year averaged $125 net per acre. In the same orchard two acres of nine-year-old seedlings averaged $360 per acre. $150 per acre is a comservative estimate of the yield from **ten to twelve-year-old** seedling trees, and while it is true some groves not well cultivated may fall below that figure, in annual yield, others under high cultivation will often almost double it.

It should be remembered that grafted trees come into bearing two or three years earlier than seedling trees, and therefore larger yields may be expected from the former at an early age. Grafted trees will bear commercially in five to six years, and will maintain a large and steady increase each year up to twenty years or more.

A Pecan orchard ten to twelve years old will yield $100 per acre over and above all expenses under reasonably favorable conditions. This is a very conservative estimate. Many instances are recorded where this yield has been greatly exceeded.

The foregoing records are of comparatively young orchards and represent what may be expected under ordinary circumstances. But with high cultivation, favorable soil, and liberal fertilization, the cost of which is more than compensated by results, these records may be greatly exceeded. And as a foretaste of what may be expected from more mature orchards, it is stated on the best of authority and experience, that it is now possible to produce English Walnut Trees that will bear, at 25 to 30 years of age, 500 pounds of nuts per tree per season. With twelve such trees to the acre a yield of 6,000 pounds per acre is obtained, which at an average market value as low as 15c per pound would give an income of $900 per acre.

Chestnuts and Filberts, too, closely rival the Walnut and Pecan in money-making ability. A single season's crop from a five-year-old Chestnut orchard brought $30,000—5,000 bushels @ $6 a bushel. This record was made by the famous "Sober Paragon" Chestnuts, which sell @ $6 to $10 per bushel in open market.

What other crops, grain or fruit, even with the most intensive cultivation, can approach these records, which are not extraordinary for nuts?

Twenty-five to fifty dollars' worth of fruit per tree per season is considered an exceptionally good showing for apple, orange, and grape fruit trees. Yet it is not at all uncommon for English Walnut and Pecan trees to yield $75 to $100 and more per tree per season. Such records are not rare.

Thus, taking into consideration the much greater ease in harvesting and marketing nuts, and the absence of risk from spoilage, the advantages of nut growing stand out prominently indeed.

It is only natural, perhaps, for the prospective nut grower to consider the possibility of over-production. There need be no fears on that score, however, for it is safe to say that neither the present generation nor the next will ever see that condition. In ten years the English Walnut crop of California doubled and in that same period the price of nuts advanced from 7c a pound to 20c a pound. The consumption of nuts is increasing out of all proportion to the production, and at the present rate, it will be many years before enough nuts are produced to supply even the home demand. By that time, nuts will have become as staple a food product as beef-steak.

Nut Growing Compared With Fruit Growing

Hardly any of the bugbears of fruit growing apply with anything like equal seriousness to nut growing. Perishability, which is one of the big factors in fruit growing, is hardly to be considered in the care of nuts. Distance from transportation facilities and from distributing centers or markets is no drawback to the nut orchardist, because his crop will keep indefinitely, and it requires no expensive refrigeration in transit. Moreover, when the market may be unfavorable, he is not forced to sell at once to avoid total loss, but may hold his crop almost indefinitely until conditions and prices improve. Thus there are no lost crops.

The spectre of parasitic troubles need hardly give the nut grower anxiety, for while nut trees are not entirely without parasitic enemies, experience has shown that such as do exist are controlled without difficulty or great expense.

The expense of cultivating and maintenance is comparatively low, while that of harvesting is exceedingly light. The crops being practically self-harvesting, five or six people are enough to care for fifty acres of trees and to gather the nuts from the ground where they fall when ripe. The cost of packing and shipping, too, are lower than with fruit. Nuts are simply packed in gunny-sacks, and, being more valuable pound for pound than fruit, the shipping charges represent a smaller percentage of the net value.

Another important consideration is the life of the trees. Nut trees are proverbially long-lived, particularly English Walnuts, which live and produce for several hundred years; and Pecans, which produce bounteous crops at the age of a century or more. Fruit trees, on the other hand, begin to deteriorate after a few years and usually outlive their usefulness during the lifetime of the planter.

Whoever plants nut trees establishes an enterprise of the most highly profitable and interesting character, provides himself against possible want in his declining years, and secures to posterity a legacy not alone of purely material value, but rich also in the finest sentiment.

Nut Orchards Pay from the Start

During the few years of waiting for the nut trees to come into bearing, a substantial profit may be obtained from the land by planting other suitable crops between the young trees. Small fruit and berries, beans, peas, vetch, potatoes, etc., make excellent and profitable crops.

Far from being a detriment to the nut trees, this inter-cropping is, on the contrary, actually beneficial to the trees, because of the extra cultivation given the land. A space of six or eight feet, at least, should be left around the base of each tree to permit cultivation. Grains and grasses should **never** be used for inter-cropping with nut trees.

The character of the crops to be grown in the young orchard must necessarily depend somewhat upon the locality and character of the soil, but a sufficient variety is available.

In many nut orchards, fruit trees—such as apple, peach, pear, and plum—are set out between the nut trees, and by the time the latter need additional room, the smaller fruit trees will have outlived their usefulness and may be uprooted without any great loss.

NUT TREES FOR ORNAMENT

"Mere bunches of leaves." Thus the purely ornamental tree is characterized by a well-known horticulturist whose enthusiasm for the Northern Nut Tree has perhaps somewhat prejudiced his judgment. Yet "mere bunches of leaves" they are—the maple, elm, beach—for they serve no purpose save that of ornament and shade.

Let the next tree you set out in your garden, lawn, or roadside be a nut tree. Then, beside sentiment and shade, you will have each year a plenteous harvest of delicious, health-giving, money-making fruit, and you will have sacrificed nothing of beauty or shade. For, the English Walnut, the Pecan, and the Chestnut, are not surpassed by any purely ornamental tree for billowy foliage, symmetry of growth or spread of branches, and the former have an additional advantage in being subject to fewer and more readily controlled parasitic enemies than most other trees.

What is probably a more important consideration, nut trees add each year an appreciable sum to the value of any property.

Mr. J. B. Wight, in a paper read before the American Pomological Society, states: "There are about two acres in my town lot which are practically bordered by Pecan Trees, some of them having just come into bearing. In all, there are twenty-two of these trees, twenty of which in 1909 bore more or less nuts. The net sales from these trees that year amounted to four hundred dollars." A fair rental, is it not, for unimproved property?

We read from the same paper: "Living on an adjoining lot to me is Mr. K. Powell, who has a seedling tree growing in his back yard. This tree is from a nut planted in 1887. For a seedling, this is an exception, both in regularity and quantity of its product. For the last three years it has borne an average of over 400 pounds of nuts per year. The surplus, above what the family used for domestic purposes, was sold for twenty-five cents per pound." It is not known what average price the entire crop might have brought, but as the poorer quality nuts were probably used by the family it would be safe to estimate the whole crop at 20c a pound. Four hundred pounds @ 20 cents—$80 a year from a back yard tree which requires no attention but to gather the nuts when they fall. It's a pretty respectable income from a "shade" tree.

Plant shade trees, by all means, but plant the kind that will pay you in something more substantial than pretty sentiment and ocular satisfaction.

NORTHERN-GROWN HARDY
PECAN TREES

Stuart

Mantura

Appomattox

Indiana

Northern Pecan culture offers splendid opportunities for rich profit. And the production of hardy, successful northern varieties which equal in every respect the southern product, is a remarkable scientific achievement, destined to play an important part in the economic progress of the whole American people.

Mr. J. B. Wight, whose paper on Pecans we have previously quoted, says: "With some knowledge of the problems that confront fruit growers in other lines, let me say that I do not believe there is a more promising field in American horticulture than Pecan growing, for sections that are adapted to this nut. Many of the difficulties that are in the way of the orchardist in other lines do not trouble the Pecan grower."

It has been demonstrated that Pecans for successful culture in the North, must be of hardy varieties, budded on stock grown from Northern Pecans, and grown under Northern conditions. Grafted trees are absolutely worthless, as experience has shown.

Mr. W. N. Roper, of Petersburg, Va., an eminent authority, stated: "Pecan trees for successful culture in the North must be of hardy, early maturing varieties, budded on stocks from Northern-grown Pecans and grown in nursery under suitable climatic conditions. These are requisites, indicated by practical experimental work extending over several years. Only well-grown, vigorous Pecan trees should be planted in the North. It is a waste of time and money to plant indifferent Pecan trees in any locality where they have to contend with severe climatic conditions. The size of the tree is less important than its root system and vigor. The purchasers of trees grown on thin, sandy soil, with root system consisting almost entirely of straight tap roots, destitute of laterals, need not expect success."

Plant only budded trees. Seedling trees are not worth setting out.

Two hardy Virginia varieties, the "Mantura" and the "Appomattox," have been planted in Massachusetts, Connecticut, Indiana, and other Northern States and have proven entirely successful there, withstanding temperatures far below zero without injury.

The "Indiana" and "Buseron," native of the State of Indiana, and "Hinton" and "Major," native of Kentucky, are so hardy that, properly grown, they may be planted in Northern states with the same assurance of successful fruiting as apple trees.

We produce the hardy stocks on which these trees are grown by planting nuts from far northern states and growing the seedlings under northern conditions. The seedlings are budded when two or three years old. Trees from these northern nuts never "winter kill." Several climatic tests are afforded in the section where these trees are grown, the temperature in winter often going below zero, while in the spring the weather is varied with sudden changes from warm to freezing.

Pecan trees will succeed in a wide variety of soils, but it is asserted by experienced growers that the potential value of the tree is so great that they deserve the best soil. Stress is laid upon the importance and value of cultivation and fertilizing, and it is maintained that 100 trees well cared for on good land are more desirable than 500 trees which are neglected. Pecans, like other crops, respond astonishingly to intensive cultivation, and trees highly fertilized regularly produce more nuts of a larger size and correspondingly higher market value. As an illustration of how Pecans respond to fertilization, Mr. Wight relates the experience of a neighbor of his who owned a fourteen-year-old tree which stood apart in a field. To test the value of fertilization, 50 pounds of guano was spread broadcast about the tree, with the result that the succeeding crop of nuts was a third larger, and sold for 20c a pound instead of 12 cents which was the market price of previous crops.

Pecans—Varieties

Appomattox. The original tree has been bearing for twenty years. The nut is medium sized, with thin shell, the kernel is plump and the flavor excellent. The flavor of the Appomattox has been compared by a southern expert with that of the San Saba pecan, the choice Texas variety, which is considered the standard of quality among pecans.

Indiana. A hardy variety originating in Knox county, Indiana. The original tree, which is fifty or sixty feet high and about five feet in circumference, bears annual crops of choice nuts. The nuts are medium in size, with a full, plump, light-colored kernel which is fine grained, sweet, nutty and of good quality.

Mantura. The original Mantura tree is a large, symmetrical specimen, with wide spreading branches. It is about eighty feet high and measures about eleven feet around the trunk. The nut is large, shell very thin, kernel dark straw-colored, with a sweet, nutty flavor. The Mantura is described in the Yearbook of the U. S. Dept. of Agriculture for 1907.

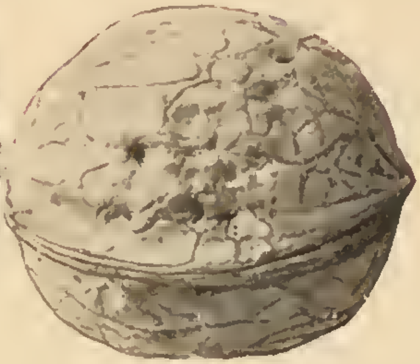
Moneymaker. The tree is precocious, prolific and hardy. It transplants well and makes vigorous growth in northern sections. The nut is medium sized and the kernel is of fine flavor and quality. The Moneymaker has proved hardy as far north as Illinois.

Stuart. The Stuart succeeds over a wide range of territory. The nut is large to very large with a kernel of a rich, sweet flavor. It is considered one of the best standard varieties for commercial growing.

PRICES

	Each	Per 12	Per 100
2-3 ft. Budded	$2.00	$18.00	$140.00
3-4 ft. Budded	2.50	20.00	150.00
5-6 ft. Budded	3.00	30.00	

6 trees at doz. rate; 50 trees at 100 rate.



HARDY ACCLIMATED ENGLISH WALNUTS

The large and growing demand for English Walnuts, as evidenced by increasing importations and advancing prices, promises much for the future profitableness of this crop. In public favor, the Walnut is at least the equal, if not the superior, of the Pecan. English Walnuts are now grown successfully in Monroe County, N. Y., and there are several large and productive orchards between Rochester and Buffalo. While not iron-clad in point of hardiness, it is generally conceded that acclimated English Walnuts will succeed wherever peaches thrive. We have seen peach trees planted alongside of English Walnut trees, killed by frost and the Walnuts escape. In the matter of soils upon which they can succeed, the English Walnuts show considerable versatility. In California and Oregon, where there are extensive orchards, we find groves producing bountifully on soil of a decidedly clayey character; other groves making fine growth on clayey hill lands of buckshot nature, where drainage is good and there is no hardpan or rock; other groves succeeding in the rich loam of valley lands, and still others at 1,000 feet elevation.

The one requisite generally agreed upon, however, is that there must be no rock or hardpan to stop or retard the growth of the tap-root. The richer soils are naturally best, as is the case in all other horticultural pursuits, but industry on the part of the orchardist, applied in the direction of careful cultivation and fertilization, will produce eminently successful orchards on indifferent soil. Continual hoeing and digging constitute the best treatment. An effective treatment for a young orchard is to plow between the rows after the spring rains cease and then stir the soil occasionally throughout the summer with disk or harrow. Moisture is thus retained much longer. No tree responds to cultivation as does the Walnut.

There are many English Walnut trees, planted on lawns here in Rochester, producing bountifully each year delicious nuts without any special attention—the character of soil, entirely ignored.

On the subject of planting Walnuts, we quote no less an authority than Luther Burbank, who states: "No one who grows English Walnuts on their own roots need expect to be able to compete with those who grow them on Native Black Walnut roots, for when grown on these roots the trees will uniformly be larger and longer lived, will hardly be affected by blights and other diseases, and will bear from two to four times as many nuts, which will be of larger size and of much better quality. These are facts, and Walnut growers should take heed."

Our trees are grown under northern conditions. By this method we secure trees that are more vigorous and which adapt themselves to a wide range of soil and climate. They ripen their wood earlier in the fall, are able to stand very low temperatures without injury. They may be depended upon to be hardy and prolific. We are convinced that to avoid disappointment, medium-sized trees must be planted. Acclimated trees cost more, it is true, but they are truly economical in the long run.

Transplanting may be done with equal success in spring or fall. In planting, the tap-root should be severely pruned to promote the growth of numerous fibrous roots as well as laterals. The trees should be mulched liberally with coarse stable manure as soon as planted.

A well-known scientist gives expression to the following: "When you plant another tree, why not plant a Walnut? Then, besides sentiment shade, and leaves, you may have a perennial supply of nuts of the improved kinds, that furnish the most delicious, nutritious and healthful food which has ever been known. The old-fashioned hit-or-miss nuts which we used to purchase at the grocery store were generally of a rich, irregular mixture in form, size and color, with meats of varying degrees of unsoundness—bitter, rancid, musty, or with no meat at all. From these early memories and the usual accompanying after effects, nuts have not been very popular until lately, when good ones at moderate prices can generally, but not always, be purchased.

Walnuts—Varieties

Mayette. (English). A standard variety well tried, the Grenoble nut of commerce. A dessert nut of the highest quality and brings the highest price in the market. Fuller, in his description of it says: "It is very large, with a light-colored shell of moderate thickness, kernel plump, readily extracted whole; sweet and rich nutty flavor." **2 to 3 ft., 75c. each; $8.00 per doz.; $60.00 per 100. Special 4 to 5 feet, $1.50 each; $15.00 per doz.**

Persian Dwarf Prolific. (English). A dwarf variety of the English Walnut that begins to bear when quite young, and yields heavily of nuts of same quality as present. **75c. each; $7.50 per doz.; $50.00 per 100.**

Pomeroy. (English). An acclimated, rugged variety, perfectly safe to plant throughout the North, wherever the Peach tree is grown. Originated 30 miles west of Rochester; the hardiest of them all. A fine, lofty-growing tree with handsome, spreading head; produces large crops of thin-shelled, delicious nuts which are always in demand at good prices. An exceedingly handsome tree for the lawn. Two-year splendidly rooted, **$1.50 each; $12.00 per doz.; $100.00 per 100.**

American Black. The large, oily nuts are borne in heavy crops. They are much relished by all persons, old and young, and always sell at a fair price. The tree grows quite fast; its dark, rich wood is exceedingly valuable. **5 to 7 ft., 75c. each; $7.50 per doz.; $50.00 per 100.**

Juglan's Cordiformis, Heart Shaped Japanese Walnut. A choice variety, grows with great vigor, forming a handsome head without pruning, and has withstood 20 degrees below zero without injury. The shell is but little thicker than that of the English Walnuts. The meats come out whole, and are of excellent quality. The trees begin to bear when two or three years old and should be planted extensively. **3-4 ft., 75c. each; $7.00 per doz.; 4-5 ft., 1.00 each; $9.00 per doz.**

THE CHESTNUT

Sober Paragon- Actual Size

Think of a Chestnut tree bearing three quarts of nuts seventeen months after being set out! That is the record made by the now famous Sober Paragon Mammoth Sweet Chestnut, introduced solely by us. Its rapidity of growth and productivity are not surpassed by any tree within our knowledge.

The nuts of the Sober Paragon are very large, often measuring one and one-half inches across, while average nuts rarely measure less than one and one-quarter inches. The burrs contain three or more broad, thick, handsome nuts. Most of us are familiar with the very large chestnuts that are commonly on the market, but we know too well their puckery, astringent flavor. Sober Paragon Chestnuts, though very large, are fully as mild and sweet as the smaller native sweet chestnuts.

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Professor Brackett, Pomologist, Washington, D. C., says: "The Sober Paragon comes nearest in quality to the native Chestnut of any of the cultivated varieties that I have examined. It is of large size, fine appearance, and excellent flavor."

Prof. John Craig, of New York State College of Agriculture, at Cornell University, says: "I beg to acknowledge yours of November 18th, and to say that your sample of Sober Paragon Chestnuts has been received. This sample illustrates a very fine variety of chestnut. The nuts will go into our permanent nut collection when the exhibition closes." This was followed by the announcement that SOBER PARAGON HAD TAKEN FIRST PREMIUM. "Although there was not a large exhibition of chestnuts, of the few plates we did have, yours easily outclassed the others in size and eating qualities. We have noticed in many varieties of chestnuts the smaller ones were almost always the sweetest, and as they grew larger they became more bitter. We could not find this fault with yours. In fact the judges seemed surprised when they tasted your plate of nuts. I am enclosing the ribbon that goes with the prize."

The planter of Sober Paragon Chestnuts has little to worry about; his trees will do better if cultivated, but that is not necessary. Frost, hail and storm which so often destroy the ordinary crops, work no ill effect on Sober Paragon Chestnut trees, as hardy as the oak; even severe droughts, which "burn up" field crops, will not ruin, but only reduce somewhat, a crop of these wonderful nuts.

For the Lawn

Whenever it can be given the proper soil, this Chestnut is almost an ideal lawn tree. For those who admire the unusual things in ornamental planting, it is particularly desirable, as its smooth trunk, roundish, dense head, handsome, dark green leaves, and great burs, render it very attractive for lawn, garden or park, or for roadsides. The leaves retain their color until well into the fall, and stay on the branches longer than the leaves of most other trees do. The tree is of very rapid growth, often making as high as five feet from the graft in a single year, while bearing quantities of nuts. Its vitality is simply marvelous.

PROFITS FROM GROWING SOBER PARAGON CHESTNUTS

So much for the tree and nut; now how about **profits?** Is there enough money in growing Sober Paragon Chestnuts to make it worth the average farmer's while? These questions the prospective grower has a right to know—**must** know; and it affords us much pleasure to be able to answer them so thoroughly and satisfactorily from our personal experience, as well as from that of others who grow and know this splendid nut. Emphatically, the culture of Sober Paragon Chestnuts pays; the market demand seems practically unlimited, and has been, so far, many times greater than the supply. One of the early crops—2,000 bushels—was taken by **one** commission merchant at a high price, and hundreds of others would gladly have bought the crop had they had the opportunity. Even across the continent, in Seattle, a commission firm last season ordered them in carload lots.

Even if the production should be doubled many times over, the markets would still take every nut that is offered. So far, Sober Paragon Chestnuts have regularly sold for two or three times as much as the inferior foreign chestnuts.

Sober Paragon Chestnuts do not drop as the wild varieties do, but remain in the bur—a decided advantage, as they cannot in this way get lost under the tree. When ripe, the burs, which contain three to five large nuts, turn brown and open up of their own accord—this generally occurs the last of September or the first of October; frost is not necessary to open the burs. They may then be easily removed from the tree and spread out to dry. The best way to get them off the trees is to use a long pole, with a fork on the end. With this implement they may be taken easily without bruising or injuring the branches.

Six dollars per bushel is a fair average price for the nuts, and the experience of other growers thoroughly accords with this. As the trees require so very little care or special attention, the cost of gathering and marketing the nuts is practically the entire expense. An acre of Sober Paragon Chestnut trees—say fifty trees, ten to finteen years of age—can be expected to yield, at the lowest estimate, 1 to 1½ bushels of nuts per tree—or, to be conservative, sixty bushels per acre. At the rate of $6 per bushel—which is much less than is often paid—an acre would bring $360 per year, with only a comparatively slight expense for upkeep and harvesting. In the Paxinos orchard are many trees, less than eight years of age, which are bearing more than a bushel and a half each.

And it should be remembered that the grove will increase in value every year. For example, let us assume that the grove has reached the age of thirty years—fifty trees to the acre. This would yield approximately $1,000 per acre, with a very low expense for harvesting and marketing.

It is estimated that an acre of wheat may yield as high as thirty-five bushels—which is, however, well above the average. Even at this high yield the farmer can hardly realize more than $35 to $40 per acre from the crop—and wheat is costly to raise. Some other things—fruits and berries and market vegetables, for example—can be made, under the most favorable circumstances, to yield $100 or more per acre. But consider, again, the work they require, how carefully they must be cultivated, and marketed just at the right time. Then again, these are **uncertain** crops: we often read of fruit-buds destroyed by frost, or of wheat winter-killing.

And there is still another attractive feature in growing Sober Paragon Chestnuts; as explained earlier, they will do well in rocky, well-drained soil, such as if often found on hillsides, be it ever so poor; in fact, any soil, except a stiff clay, will answer. There are thousands of acres of such land all over the country, either entirely idle, or used for pasture. Think of planting such land so that it would, after a few years, yield an annual income of $300 to $1,000 per acre! Sober Paragon bears the first season, and is a dividend payer from the start.

WARNING

This is our Trade Mark and purchasers should refuse trees not bearing this seal, as they are not genuine.

To every Sober Paragon Chestnut Tree, when shipped, is attached a metal seal upon which is impressed the words, "SOBER PARAGON," as illustrated herewith.

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PRICES OF SOBER PARAGON

(Sold Exclusively by Us.)

Standard Grafted trees—Strong root system

	Each	Per 12	Per 100	Per 1000
3-5 ft.	$2.00	$18.00	$110.00	$900.00

SPECIAL

We also offer a limited number of **Bearing Trees** (Nursery grown), heavily rooted, handsomely branched. **6 to 7 feet in height, at $3.00 each; $30.00 per dozen.**

OTHER VARIETIES

American Sweet. The nuts of this tree form quite an item in our commerce. This Chestnut is also a grand timber and ornamental shade tree, spreading, in midsummer, billowy masses of creamy, fragrant catkins above its large, deep green leaves, making a most beautiful specimen on the lawn. **5 to 6 ft., $1.00 each; $9.00 per 12; $60.00 per 100.**

Japan or Giant. Of the very many good things from Japan, none is more worthy than this. Decidedly ornamental, hardy and productive; of dwarf habit, bearing extremely young. Nuts of enormous size. **3-4 ft., $1.00 each; $8.00 per doz.; $60.00 per 100.**

Rochester. An improved native. Nuts of the largest size, very sweet, with nutty flavor. Tree an unusually rapid grower, abundant bearer, and perfectly hardy. **4-5 ft., $1.25 each; $12.00 per 12.**

Spanish. Handsome, round-headed tree, producing large crops of very large nuts that sell readily at good prices. Not so sweet as Sober or American. Beautiful for lawn, and valuable as shade trees. **4-5 ft., 75c. each; $7.50 per doz.; $50.00 per 100.**

TYPICAL BURR SOBER PARAGON — ACTUAL SIZE

NUTS THAT GROW IN THE NORTH

A few years ago, some of the facts presented in the foregoing pages, were brought to our notice. The real condition of the nut-growing industry came at once under our close observation, and as nurserymen, we could not help but realize the great potential value of hardy Northern nut trees. Accordingly, we prepared to take advantage of the situation by establishing, as an important branch of our business, a nut department, which receives the best of our knowledge and experience gleaned from many years' scientific research and experiment. To a great extent, we have made a specialty of nut-culture, particularly the development of hardy northern varieties of southern nuts.

Our trees are propagated and raised in a soil particularly adapted to induce the healthiest conditions of growth, namely, that solid, firm texture of wood with abundant fibrous root so necessary to successful transplanting. And, being located near the shores of Lake Ontario, with wide variations of temperature, (sometimes 15° below zero) the conditions are very favorable to the production of sturdy, robust stock.

Our Catalog and Planting Guide, a copy of which will be sent promptly upon request, includes Filberts, Almonds, Hickories, and a complete assortment of Evergreen and Deciduous Trees, Shrubs, Roses, Perennials, Fruit Trees, and Small Fruits.

GLEN BROTHERS, Inc.
GLENWOOD NURSERY
Established 1866
Rochester, N. Y.